

GLOSSARY FOR GROSS PATHOLOGIC SKIN LESIONS **AND ITS BASIC PATHOLOGIC CHANGES**

A:

ABSCCESS:

- Collection of neutrophils that may form within:
 - Epidermis.
 - Dermis.
 - Hair follicle.
 - Subcutaneous fat.
 - Or any other organ.
- Degeneration of neutrophils → accumulation of fat in their cytoplasm → pus gets its yellowish appearance.

ACANTHOLYTIC CELL:

- Epithelial cell undergoing dyshesion. i.e. separation from another epithelial cell to become round.
- Cells in the spinous, granular and cornified layers may undergo acantholysis.

ACANTHOLYSIS:

- The process by which acantholytic cells occur = loss of cohesion between epidermal cells → formation of intra-epidermal lacunae, vesicles or bullae.

2 types:

Primary:

- Occurs among unaltered cells as a result of dissolution of intercellular substance.
 - e.g.: - Pemphigus vulgaris.
 - Darier disease.
 - Pemphigus foliaceus.
 - Benign familial pemphigus.
 - Transient acantholytic dermatosis.

Secondary:

- Occurs among altered or damaged cells.
 - e.g.: - viral vesicles.
 - Impetigo.
 - Solar keratosis.
 - Sub corneal pustular dermatosis.
 - Adenoid dyskeratotic squamous cell carcinoma.

ACANTHOSIS:

- Increase in the thickness of stratum malpighii.

ACINAR: (= bunch of grapes)

- Spaces lined by epithelium, gland like or duct like structure.

ACRAL PARTS OF THE SKIN:

- Distal parts of the skin, especially skin of the fingers and toes, also nose and ears.

AMPHOPHILIC:

- Having both basophilic and eosinophilic staining qualities.

ANAGEN: (= mature hair)

- Indicates that part of hair cycle during which hairs grow and the inferior portion of the hair follicle has:
 - Fully developed bulb.
 - Tricholemal sheath.
 - Papilla that contains abundant mucin.

APOPTOSIS: (Dropping off of colloid bodies)

- A kind of necrosis of keratinocytes in which the necrotic cells are subsequently phagocytosed → colloid bodies.

ANAPLASIA:

- Atypical appearance of nuclei, found in malignant neoplasia (nuclei are large, irregular, hyperchromatic and atypical mitosis).

ARBORIZATION:

- Describes a tree like shape as a result of inward turning of epithelial structures at the periphery of a common wart or a pyogenic granuloma (= epidermal collarette).

ARGENTAFFIN:

- It's the ability to reduce silver salts to metallic silver. Melanin possesses phenolic groups capable of reducing the silver salts that are present in ammoniated silver nitrate to free black silver.

Reduction by phenolic groups in melanin

Ammoniated silver nitrate -----→ silver (free, black)
Present in Fontana- Masson stain.

ARGYROPHILIC:

- Substance like melanin, nerves and reticulum fibers.

Reduction with hydroquinone black

Can be impregnated with silver nitrate solution -----→ metallic silver

ATOPY:

- Genetic disposition to development of:
 - Atopic dermatitis.
 - Allergic rhinitis.
 - Allergic urticaria.
 - Allergic asthma.

ATROPHY:

- Refers to a decrease in skin substance

2 clinical types:

Superficial atrophy:

Thinning of the skin, shininess, loss of skin markings, telangiectasia, wrinkling, loss of hair follicles, pigmentary changes.

Histologically: thinning of epidermis, loss of rete papillae pattern, sclerosis of papillary dermis.

Deep atrophy:

Result from: loss of connective tissue in the reticular dermis (stria atrophicans), loss of subcutaneous fat (lipodystrophy).

ATYPIA:

- Is applied to nuclei (see anaplasia).

B:

BALLOONING DEGENERATION OF EPIDERMIS:

- Type of degeneration of epidermal cells causing intracellular oedema with swollen pale cytoplasm.
- Marked swelling of cells → loss of intercellular bridges and acantholysis → bulla may form. e.g. viral vesicles.

BASAL CELL HYPERPLASIA:

- ↑ no. of basal cells.
- e.g.: - in focal acantholytic dyskeratosis.
 - In epidermis above dermatofibroma.

BASALOID:

- Resembling the cells of the basal layer of epidermis. E.g. cells making up seborrheic keratosis and basal cell carcinoma.

BASAL LAMINA:

- Identical to basement membrane.

BASEMENT MEMBERANE:

- Homogenous band composed of filaments extending along the under-surface of the epidermal basal cells.
- It s only 35-45nm thick, i.e. it s sub-microscopic structure seen only by E. M.

BASEMENT MEMBERANE ZONE:

- Visible by L.M. with the PAS reaction.
- Located beneath the basal cell layer.
- It s between 0.5-1µm thick (i.e. is 20 times thicker than the basement membrane).

- Basement membrane zone is not homogenous, it consists of: lamina lucida, anchoring fibers and reticulum fibers.

BASKET-WEAVE PATTERN OF STRATUM CORNEUM:

- Applies to the normal appearances of the cornified layer (except for that on the palms and soles) in sections of skin viewed by L.M.

BENIGN:

- Is a word that describes the behaviour of a neoplasm, one that doesn't have the potential for metastasis (it shouldn't be used to describe cytologic character).

BIREFRINGENCE:

- On microscopic examination with polarized light, birefringent (= doubly refractile substances are visible as bright white bodies in a dark field).

BULLA:

- A fluid filled circumscribes elevated lesion, greater than 1 cm in diameter.
- It may occur: → intra-epidermal: Pemphigus Vulgaris
→ Sub-epidermal: Bullous Pemphigoid, Dermatitis Herpetiformis.
- Fluid inside the bulla may be: tissue fluids, blood plasma, inflammatory cells or epidermal cells (acantholytic keratinocytes).

BULBOUS:

- Designates resembling a bulb in shape, like a light bulb, the bulb of an onion or of the dermal papillae in lichen amyloidosis.

C:

CARTWHEEL PATTERN:

- Occurs in various fibrous tumours.
- Elongated cells radiate from a central hub of fibrous tissue in a whorl like fashion.
- Is often associated with storiform pattern.

CASEATION NECROSIS:

- Type of tissue death described for T.B. and S.
- Affected tissue has lost its structural outlines and consists of pale, eosinophilic, amorphous finely granular material.
- Pyknotic or fragments of nuclei may still be recognized.

CATAGEN:

- Designates the involutional stage of the hair cycle in which the inferior part of the hair follicle is characterized by a thickened, corrugated and glassy membrane.

CHOLESTEROL CLEFTS:

- Elongated spaces with pointed ends that represent sites from which crystals of cholesterol have been removed from tissue by agents used in processing.

CLEFT:

- Describes a narrow space without lining and without contents.
- e.g.: - Basal Cell Carcinoma.
 - Spitz's Nevi or Focal Acantholytic Dyskeratosis (Darier disease).

COARSE COLLAGEN IN VERTICAL STREAKS:

- Refers to a diagnostic sign of persistent rubbing of skin.
- e.g.: - Lichen simplex chronicus.
 - Prurigo nodularis.
 - Picker's nodule.
- Coarse collagen fibers in a thickened papillary dermis are oriented parallel to one another and to the rete ridges and perpendicular to the skin surface.

COLLARETTE OF EPITHELIUM:

- Describes the inward bowing of epithelium surrounding pyogenic granuloma and verruca of seborrheic keratosis.

COLLIQUATIVE NECROSIS:

- Necrosis associated with formation of pus (invasion by neutrophils).

COLLOID:

- Homogenous eosinophilic material of variable composition.
- e.g.: - **In Juvenile Colloid Milium:** Colloid is of epidermal derivation.
 - **In Adult Colloid Milium:** Colloid is synthesized by fibroblasts in dermis.

COLLOID BODIES: (= Civatte Bodies):

- Round, ovoid, homogenous, eosinophilic, measuring 10µm in diameter, seen in lower epidermis or upper dermis.
- **Occur in:** - Lichen Planus
 - Lupus Erythematosus
- **Pathogenesis:** degeneration of epidermal cells → extruded into the dermis (a process referred to as APOPTOSIS or DROPPING OFF).

COMEDO:

- Dilated hair follicle infundibulum, full with:
 - Cornified cells.
 - Sebaceous material.
 - Micro-organisms.
- **2 types:** - Primary: e.g. acne vulgaris

- Secondary: e.g. steroid acne.

COMPACT ORTHOKERATOSIS:

- The normal configuration of stratum corneum of the palms and soles and in some pathological conditions, e.g. lichen simplex chronicus. (Cornified cells are closely packed together).

COMPOUND NEVUS:

- Nests of melanocytes in the epidermis + nests of nevus cells in the dermis.

CONNECTIVE TISSUE NEVUS:

- Denotes a congenital malformation:
 - Of the dermis: -Papillary dermis: resembling clinically skin tags.
- Reticular dermis: it involves collagen, elastic tissue or both.
 - Of the fat: = nevus lipomatosus.

CORDS:

- Epithelial cells in rows of two.

CORNOID LAMELLATION:

- A column of parakeratosis which extends above the epidermis and into it.
- Consists of vacuolated and dyskeratotic cells + retained nuclei.
- Pathognomonic for parakeratosis.

CORPS ROUNDS:

- Acantholytic dyskeratosis.
- Faulty and premature keratinisation of individual keratinocytes.
- **Consists of**: central homogenous basophilic pyknotic nucleus, surrounded by a clear halo, with shell of basophilic dyskeratotic material peripheral to the halo.
- **Occurs in**: - Darier disease
 - Transient acantholytic dermatosis.
 - Warty dyskeratoma.
 - Focal acantholytic dyskeratoma.
 - Familial benign pemphigus.

CRUST:

- Dried exudate.
- Composed of serum containing:
 - WBCs &/or RBCs.
 - Necrotic keratinocytes.
 - Parakeratotic cells.
 - Fibrin.
 - Bacteria.

CYST:

- Epithelium lined cavity containing fluid or solid material.
- **Infundibulum cyst: (epidermoid cyst):** lined by epithelium resembling the upper portion of hair follicle, and contain cornified cells in basket weave or laminated pattern.
- **Sebaceous duct cyst (steatocystoma):** lined by epithelium resembling duct of sebaceous gland and contains sebaceous material.
- **Eccrine duct cyst: (Eccrine hidrocystoma):** lined by epithelium resembling duct of eccrine gland and contains sweat like substance.
- **Apocrine hidrocystoma:** lined by epithelium that shows decapitation secretion and contains apocrine secretions.

D:

DEGENERATION:

- Ballooning, granular and reticular degeneration of the epidermis (each will be dealt with separately).

DEGENERATION OF COLLAGEN:

- Loss of normal structure of collagen seen as granular basophilia in sections stained by H&E.
- Should not be referred as necrosis of collagen.

DEPOSIT:

- A substance as mucin, amyloid or urate is not normally present in quantity in the skin.
- e.g.: Nodular Amyloidosis, Lichen Amyloidosis.

DESMOPLASIA: (EXCESSIVE FIBROSIS)

- Designates the fibroplasias that develop in response to certain epithelial neoplasms such as malignant melanoma.

DIFFERENTIATION:

- Refers to the relative capability of the neoplasms to resemble a normal structure.
 - **When successful:** neoplasms are designated **well- differentiated.**
 - **When unsuccessful:** they are termed **poorly differentiated.**

DIGITATED:

-Refers to one type of papillated epidermal hyperplasia, namely finger like projections above the skin surface as in verruca vulgaris.

DYSKERATOSIS:

- Faulty and premature keratinization of individual keratinocytes.
- 2 types are recognized:

- **Acantholytic dyskeratosis: (= Corps Ronds):**
 - Consists of central homogenous basophilic pyknotic nucleus surrounded by clear halo.
 - Peripheral to the halo, there is a shell of basophilic dyskeratotic material.
 - E.g.: - Darier disease.
 - Warty dyskeratoma.
 - Focal acantholytic dyskeratoma.
 - Transient acantholytic dyskeratosis (occasional).
 - Familial Benign Pemphigus. (Rare).
- **Neoplastic Dyskeratosis: (= individual cell keratinisation):**
 - Appear as homogenous strongly basophilic bodies, 40µm in diameter, with central remnants of nuclei.
 - E.g.: - Bowen's disease.
 - Solar keratosis.
 - Squamous cell carcinoma.
 - Keratoacanthoma.
 - Proliferating tricholemmal cyst.

E:

EPIDERMOLYTIC HYPERKERATOSIS: (= GRANULAR DEGENERATION):

- Compact hyperkeratosis.
- Marked thickening of the granular layer with increased number of keratohyaline granules.
- Perinuclear clear space in the upper stratum malpighii with indistinct cell boundaries.
- It occurs in the following diseases:
 - Epidermal hyperkeratosis.
 - Epidermolytic keratosis pulmaris et plantaris.
 - Solitary and disseminated epidermolytic acanthosis.
 - Incidental epidermolytic hyperkeratosis.
 - Linear epidermal nevus (systematized type).

ECCHYMOSIS: (PURPLE PATCH):

- Broad flat purpuric lesion that results from bleeding into the upper part of the dermis.
- Pathogenesis: macular lesion >1 cm, caused by extravasation of erythrocytes in dermal papillae.

EDDIES OF SQUAMOUS CELLS:

- Whorls of spinous cells that seem to form around intraepithelial eccrine sweat duct especially in seborrheic keratosis and warts that have been irritated (signs of biologic benignancy).
- Sometimes central keratin is present that resembles squamous cells nests of squamous cells carcinoma, but it's numerous, smaller in size, and no atypia.

ELASTOTIC MATERIAL: (=SOLAR ELASTOSIS):

- The altered spaghetti like connective tissue that is produced by fibroblasts that have been chronically exposed to damaging effects of sun light.

EPIDERMAL HYPERPLASIA : (=ACANTHOSIS):

- Increased number of spinous cells in the epidermis → thickened epidermis.
- **Different patterns:**
 - **Psoriasiform:**
 - CCC: - evenly elongated rete ridges.
 - Preservation of rete papillae configuration but exaggerated.
 - e.g.: - psoriasis.
 - **Irregular: (saw tooth):**
 - CCC: - uneven elongation of pointed rete ridges.
 - Obliteration of the normal papillae configuration.
 - e.g.: - Lichen Planus.
 - **Papillated:**
 - CCC: - upward projection of epidermis above skin surface.
 - caused by upward elongation of dermal papillae (=papillomatosis).
 - e.g.: - verruca vulgaris.
 - **Pseudocarcinomatous: (= resembles squamous cell carcinoma):**
 - CCC: - irregular invasion of the dermis by uneven sharply pointed epidermal cell masses and strands.
 - Proliferation extends below level of sweat glands.
 - may appear as isolated islands.
 - Invasion of epithelium by leucocytes.
 - No atypia.
 - Well differentiated squamous cells.
 - e.g.: - lupus vulgaris. - Osteomyelitis.
 - Base of kerato-acanthoma. - Stasis dermatitis.
 - Scrofuloderma. - Edges of chronic ulcers.

- Gumma. – Pyoderma gangrenosum.
- Basal cell carcinoma.
- Chronic proliferative inflammatory processes:
bromoderma, blastomycosis, hidradenitis suppurativa.

EPIDERMAL NEVUS:

- Congenital malformation characterized by papillous or digitated epidermal hyperplasia with hyperkeratosis.

EPIDERMOPOIESIS:

- Means the making of the epidermis, the process of maturation of epidermal basal cells into cornified cells.

ENDOPHYTIC:

- Growing inward from the skin surface.

EPITHELIOID TUBERCLE:

- Collection of epithelioid cells (histiocytes), when not surrounded by lymphocytes, they are termed (naked tubercle), which is a characteristic feature of the granuloma of sarcoidosis.

EPIDERMOTROPISM:

- Presence of mononuclear cells in the epidermis without spongiosis.
- It occurs in 2 forms: - singly, surrounded by a clear halo.
- Aggregated = Pautrier Microabscesses (pathognomonic of M.F.)

EXOCYTOSIS:

- Presence of mononuclear cells in the epidermis with spongiosis and with micro vesiculations.
- E.g.: subacute dermatitis.

EROSION:

- Area in which the epidermis is absent but the dermis is intact, so that healing takes place without scarring. (In contrast with an ulcer).

EXOPHYTIC:

- Means growing outward from the skin surface.

EXO-ENDOPHYTIC:

- Means growing outward and inward from the skin surface.

F:

FASCICLE:

- Elongated collection of spindle shaped cells.

FIBRILLAR:

- Arrangement in fibrils, i.e. delicate slender strands of connective tissue.

FOCAL ACANTHOLYTIC DYSKERATOSIS:

- A focus of suprabasal cleft, above which there are acantholytic and dyskeratotic cells in the spinous and granular layers and above them columns of parakeratosis.

FROND-LIKE:

- Leaf like.

FIBRINOID DEGENERATION OF CONNECTIVE TISSUE:

- Permeation of collagen with fibrin, giving the involved area a brightly eosinophilic homogenous appearance +_ degenerative changes.
- **E.g.:** - in allergic vasculitis:
 - Fibrin deposits around and within the vessel
 - Vascular damage
 - Extravasation of erythrocytes.
- **Rheumatoid nodules:**
 - Areas of fibrinoid permeation of the collagen appear anuclear.
- **Lupus erythematosus:**
 - Fibrinoid deposits are seen:
 - in subepidermal B.M. region.
 - Around blood vessels.
 - Or the surface as well as within collagen bundles.
 - So areas involved appear homogenous, thickened and eosinophilic.

G:

GERMINAL CENTERS:

- Central part of a lymphoid follicle within a lymph node.
- Seen in skin in pseudo lymphomas (= lymphoid infiltration of the dermis).

GERMINATIVE CELLS:

- Cells of the basal layer of the epidermis, hair matrix and matrix of the nail.
- These are cells that generate daughter cells that produce cornified end products.
- **E.g.:** -Cornified layer. - Hair shaft. -Nail plate.

GRANULAR DEGENERATION OF EPIDERMIS:

- Mentioned as epidermolytic hyperkeratosis.
- **Occurs in:** - epidermolytic hyperkeratosis.
 - Linear epidermal nevus (systematized type).

GRANULATION TISSUE:

- Newly formed oedematous collagenous material showing:
 - Numerous fibroblasts.
 - Newly formed capillaries.
 - Dense cellular infiltrate:
 - Eosinophils, neutrophils, lymphoid cells, plasma cells and macrophages.
- Seen in the following conditions:
 - Chronic inflammatory processes.
 - healing processes.
 - Ulcers.

GRANULOMA:

- Chronic proliferative lesion, containing:
 - Mononuclear cells: lymphocytes, monocytes and macrophages.
 - Epithelioid cells and / or multinucleated giant cells.

- Types:

- Foreign body granuloma:

- Showing:
 - macrophages.
 - Multinucleated giant cells.
 - Few or no epithelioid cells.
- Occurs as a response to:
 - exogenous substance: e.g.: oil, suture, starch powder.
 - Endogenous substance: e.g.: urate or keratin.

- Allergic granuloma:

- It occurs when delayed hypersensitivity has already developed to:

- The foreign material: e.g.: zirconium, beryllium and dyes for tattooing.

- Micro organisms which had been phagocytosed: e.g.: mycobacterium tuberculosis, mycobacterium leprae, treponema pallidum and fungi causing fungal infections.

- Idiopathic allergic granulomas: e.g.: sarcoidosis, allergic granulomatosis.

- It shows:

- Epithelioid cells.
- Multinucleated giant cells (= Langhans giant cells = smaller than foreign body giant cells, with peripheral nuclei arranged in horse shoe manner).

- **Infective granuloma:**

GRENZ ZONE:

- Narrow space of normal collagen separating the epidermis from a very dense dermal cellular infiltrate.
- E.g.: - lepromatous leprosy.
 - Granuloma fasciale --> vasculitis.
 - Lymphocytoma cutis.

GUTTATE:

- Drop sized and shaped, usually applied to eruptive lesions of psoriasis.

H:

HEMATOMA:

- A nodule formed by bleeding into the lower part of the dermis And / or subcutaneous tissue.

HORN PSEUDOCYSTS:

- Are whorls of delicate, laminated orthokeratotic cells that form in the absence of well defined epithelial linings within seborrheic keratosis and trichoepitheliomas.

HYALINE BODIES:

- Are necrotic keratinocytes.
- **Also termed:** - colloid bodies. – Civatte bodies. – Apoptotic bodies.

HYPERCHROMASIA:

- Over colouration, increased intensity of nuclear staining.

HYPERGRANULOSIS:

- Increased thickness of stratum granulosum.
- Usually associated with orthokeratosis.
- E.g.: - Lichen Planus. – Verruca Vulgaris. – Linear epidermal nevus.

HYPERKERATOSIS:

- Increased thickness of the cornified layer.
- **2 types:**
 - **Orthokeratosis:**
 - Normal cornification i.e. Cells have cornified completely without retained nuclei.
 - 3 patterns: - Basket weave: e.g.: taenia versicolor.
 - Compact: e.g.: Lichen Simplex Chronicus.
 - Laminated: e.g.: Ichthyosis vulgaris.

- **Parakeratosis:**

- Departure from normal cornification, pyknotic nuclei are retained in the cells of the horny layer.
- occurs in diseases with accelerated cell turnover.
- ↓ granular cell layer beneath.

Types: - focal: e.g.: guttate psoriasis.

- Confluent: e.g.: psoriatic plaque.

HYPERPLASIA OF ATYPICAL MELANOCYTES:

- ↑↑ no. of melanocytes with atypical nuclei within or above the basal layer of epidermis and within epithelial structures of adnexa.
- E.g.: Lentigo Maligna: Melanoma in situ or dysplastic melanocytes → horizontal growth not vertical yet.

I:

ICHTHYOSIS:

- A skin condition characterized by fish like scales.
- E.g.: - congenital: - Ichthyosis vulgaris. – X-Linked Ichthyosis.
 - Acquired: - acquired Ichthyosis in patients with: - lymphoma.
 - Carcinoma.
 - Sarcoidosis.

INCONTINENCE OF PIGMENTS:

- Damage of the cells of the basal layer → loss of melanin from these cells → accumulation of melanin in the upper dermis within melanophages (=melanin engulfed by macrophages).
- e.g.: - incontinentia pigmenti. – lichen planus.
 - Poikiloderma atrophicum vasculare. – fixed drug eruption.
 - Erythema dyschromicum perstans.

INDIAN FILLING OF CELLS:

Extension of single rows of cells between and around collagen bundles.

It is seen in: - Non-Hodgkin's lymphoma: diffuse and follicular Indian filling.

- Metastatic infiltrating duct carcinoma of breast.
- Lymphocytoma cutis.
- Granuloma annulare.
- Lymphocytic lymphoma.

INFILTRATING MARGINS:

- Interposition of neoplastic cells between collagen bundles.
- A poorly circumscribed neoplasm.

INFUNDIBULUM OF HAIR FOLLICLE:

- Upper funnel shaped portion of the hair follicle.

- Bounded by the osteum above and the duct of sebaceous gland below.

INTRADERMAL NEVUS:

- A lesion composed of nests, cords and strands of nevus cells within the dermis.

INTERCELLULAR OEDEMA OF EPIDERMIS:

- See spongiosis.

INTRACELLULAR OEDEMA OF EPIDERMIS:

- See reticular degeneration.

IRREGULAR EPIDERMAL HYPERPLASIA:

- Elongated rete ridges of uneven lengths, but with preservation of the normal undulating pattern between rete ridges and dermal papillae.

ISTHMIC PORTION OF THE HAIR FOLLICLE:

- The intermediate portion, bounded by the duct of sebaceous gland above and the site of attachment of the erector muscle below.

J:

JUNCTIONAL NEVUS:

- A lesion composed of nests of melanocytes confined to the epidermis, usually at the dermo-epidermal junction.

K:

KARYORRHEXIS:

- **FRAGMENTATION OF NUCLEI RESULTING IN NUCLEAR DUST.**
- **OCCURS IN LEUCOCYTOCLASTIC VASCULITIS.**

KERATIN:

- 2 forms of keratin exist:
 - **Soft keratin:** in stratum corneum of epidermis.
 - **Hard keratin:** in hair cortex and nails.
- In the epidermis: sudden keratinisation occurs → tonofibrils contain no disulfide bonds and remain soft (here, keratohyaline provides strength and stability to tonofibrils).
- In the hair cortex and nail: slow keratinisation occurs → tonofibrils contain disulphide bonds and become hard keratin (keratohyaline doesn't participate).

KERATINOCYTE:

- All epidermal cells with the exception of dendritic cells, = form keratin.

KERATOHYALIN:

- Deeply basophilic irregularly shaped granules, present in cells of the granular layer.
- Keratohyaline contains many disulphide bonds, cumulating the tonofibrils of the epidermis → provides it strength and stability (remains soft and flexible).

KERION CELLS:

- Marked inflammatory reaction, occurring in certain fungal infection of the scalp.
- **CCC:** - boggy on palpation.
 - discharging pus.
 - Little tenderness.
 - Defence reaction occurs → destroy the fungus → spontaneous healing.

L:

LACUNA:

- Small slit like space (intraepidermal bulla).
- E.g.: Darier disease and solar keratosis.

LAMELLAR COLLAGEN:

- Collagen fibers in the papillary dermis, arranged in parallel to themselves, especially beneath melanocytic hyperplasia.
- E.g.: - simple lentigens.
 - Atypical melanocytic hyperplasia (e.g.: malignant melanoma in situ).

LAMINATED ORTHOKERATOSIS:

- Cornified cells arranged in plate-like fashion.
- E.g.: - Ichthyosis vulgaris. – X-Linked Ichthyosis.

LANGERHANS CELL: (CLEAR CELL):

- A dendritic cell present in the upper layers of the stratum malpighii.
- In routine sections (H&E): seen as high level clear cells.
- They take their origin in the bone marrow
- Play an important role in contact dermatitis and mycosis fungoides.
- Special stains: - adenosine triphosphate, monoclonal antibody T6.

LANGHANS' GIANT CELL:

- Due to fusion of epithelioid cells.
- Specific for T.B. granuloma. (See granuloma).

LEUKOCYTOCLASIS: (= FRAGMENTED NUCLEI OF PMN):

- Disintegration of nuclei of leucocytes especially in allergic vasculitis, resulting in nuclear dust.

LICHENIFICATION:

- Thickening of the skin.
- **E.g.:** - plaques of lichen simplex chronicus.
 - Nodules of prurigo nodularis (- chronic persisting rubbing)
- **Clinically:** induration, scales, hyperpigmentation, and accentuation of normal skin markings.
- **Histologically:** - epidermal changes: - hyperkeratosis.
 - Hypergranulosis.
 - Acanthosis.
- Thickened papillary dermis: by collagen in vertical streaks.

LICHENOID:

- Resembling lichen planus clinically, i.e. flat topped nodules.

LICHENOID TISSUE REACTION: (INFILTRATE HUGGING D.E.J.):

- Band like inflammatory infiltrate in close approximation to the basal cell layer, often invading it, obscuring the dermo epidermal junction, and causing cytolysis of keratinocytes and melanocytes → wiped off appearance.

LIQUEFACTIVE DEGENERATION OF BASAL CELLS:

- Hydropic degeneration of basal cells.
- **Morphology:** It causes vacuolization of the basal cells and appears as minute clear spaces at the dermo epidermal junction.
- **Results:** - pigmentary incontinence with increased number of melanophages in upper dermis.
 - Severe damage to the basal cell layer → subepidermal bullae.
- It occurs in the following conditions:
 - Lupus erythematosus.
 - Lichen planus (early lesion).
 - Lichen sclerosis et atrophicus.
 - Poikiloderma atrophicum vasculare.
 - Erythema dyschromicum perstans.

LYMPHOID CELLS:

- Have the histologic appearance of lymphocytes.
- In routinely stained sections, both lymphocytes and monocytes are indistinguishable, showing small round deeply basophilic nucleus with thin layer of cytoplasm.

LOBULAR PANNICULITIS:

- Inflammatory process in the subcutaneous fat, recognized by the scanning power (low-power).
- The inflammatory cells are situated within fat lobules, e.g: erythema induratum.

LYMPHOID FOLLICLES:

- Collections of mononuclear cells that resemble germinal cells in lymph nodes.

M:

MACROPHAGE:

- precursors of macrophage: are in the bone marrow and circulating blood(monocytes), monocytes leave the blood stream → accumulate in the dermis (simulate lymphocytes and differ only histochemically by their content of lysosomal enzymes).

Change into

- Dermal monocytes -----→macrophages or histiocytes.

Nucleus: Small round deeply basophilic. -----→large elongated vesicular.

- Macrophages are actively phagocytosing cells, after completion of the phagocytosis; they fuse into multinucleated giant cells.
- In F.B. reactions and in delayed hypersensitivity reaction, e.g.: T.B., macrophage -→ epithelioid cells (which may fuse --> multinucleated giant cells).

MACULE:

- Small flat non-palpable spot on the skin up to 1 cm. in size and of different colour than the surrounding normal skin.
- **Pathogenesis:** - Increase epidermal melanin. (Freckle).
 - Decrease epidermal melanin. (Vitiligo).
 - Extravasated erythrocytes in the papillary dermis. (Petichae= pink point purple macule).
 - Erythrocytes within dilated capillaries in papillary dermis (reddish macule).

MALIGNANT:

- Is a word that describes the biologic behaviour of the neoplasm (the ability to invade or infiltrate surroundings and ability to metastasize).
- N.B.: it should not be used to describe cytologic ccc.

MATURATION:

- The end stage of development of germinative cells. E.g.: cornified cells as the end stage of basal cells.
- The tendency for nuclei of nervous cells to become smaller with progressive descent into the dermis (denoting benignity).
- This contrast with melanocytes of malignant melanoma which usually do not.

MELANOCYTE:

- A dendritic cell normally present in the basal cell layer of epidermis and hair matrix.
- Seen in the routine sections as basal layer clear cell.
- It possesses the ability to form melanin through enzymatic oxidation of tyrosine.

MELANOPHAGE:

- A phagocytizing macrophage or histiocyte that has ingested melanin granules.

METACHROMASIA:

- The phenomenon of reacting with a different colour from that of the dye used for staining.
- It can be observed in the presence of:
 - **Acid mucopolysaccharides:**
 - sulphated:
 - Present in: - granules of mast cells.
 - Hair papillae of anagen hair.
 - They stain metachromatically, i.e. purple.
 - Methylene blue, toluidine blue and giemsa stain (+ve)→ blue.
 - Sulphur free:
 - present in the dermal mucin of the mucinoses.
 - They stain metachromatically at PH 3.0 only. (Not at PH1.5).
 - **Amyloid:**
 - show red metachroma with crystal violet.

METAPLASIA:

- Change of one type of tissue into another.
- e.g.: - metaplastic ossification within cutaneous tumours.
- Pilomatrichoma. - intradermal nevus.

METASTASIS: (OUT OF PLACE):

- They spread by blood or lymph vessels of neoplastic cells from a primary neoplasm to distant sites, often the cause of death.

MICROABSCESSES:

- Small accumulations of cells in the epidermis or the subepidermal papillae (dermal papillae).
- **3 types:**
 - **Intraepidermal:**
 - Munro's microabscess:
 - disintegrated neutrophils in the parakeratotic horny layer (=pustular psoriasis).
 - Pautrier microabscess:
 - Mononuclear cells+ mycosis cells in the stratum malpighii (in mycosis fungoides).
 - **Intradermal:**
 - Papillary microabscess:
 - = neutrophils predominance (in dermatitis herpetiformis).
 - Eosinophilic predominance (in inflammatory lesions of bullous pemphigoid).

MICROVESICULATION:

- Small spaces within the epidermis as a result of spongiosis, ballooning or acantholysis.
- These spaces are not sufficiently large to be recognized clinically as vesicles or blisters.
- E.g.: subacute dermatitis.

MIXED INFLAMMATORY INFILTRATE:

- An infiltrate composed of different types of cells .i.e. more than simply lymphocytes and histiocytes, but also neutrophils, eosinophils and plasma cells.

MUCIN:

- **2 types:**
 - **Dermal:**
 - forms the ground substance.
 - consists of acid mucopolysaccharides.
 - CCC: - PAS (-ve).
 - stains with Alcian Blue at PH 2.5 (not 0.4).
 - stains metachromatically with M.B. & T.B. at PH 3.0.
 - is hyaluronidase labile.
 - **Epithelial: (= sialomucin):**
 - found in:
 - Granules of the dark secretory cell of eccrine glands.

- Some granules of the apocrine glands.
- Within oral mucous cyst and cells lining them.
- Metastatic G.I. carcinoma.
- Cells of secondary extra-mammary Paget's disease extending from mucin secreting adenocarcinoma.
- CCC: - PAS (+ve) and diastase resistant.
- stains with Alcian Blue at PH 2.5.
- doesn't stain metachromatically with M.B and T.B..
- is hyaluronidase resistant.

MUNRO'S MICROABSCESS:

- Mentioned B4.

MYOEPIHELIAL CELLS:

- Epithelial cells, forming the peripheral cell row in the secretory segment of eccrine and apocrine glands. (Especially in breast acini).
- They contain contractile myofibrils, just like those present in the glomus cells and in the smooth muscles of the blood vessels and in the erector pilae muscles.
- They are of epithelial derivation.

N:

NECROTIC CELL:

- A cell that has died suddenly with a pyknotic nucleus and brightly eosinophilic cytoplasm. e.g. erythema multiform or fixed drug eruption.
- Dyskeratotic cells are also dying cells (more slowly).
- **If keratinocytes die:** - rapidly: normal cornified layer.
- Slowly: parakeratotic cornified layer.

NECROTIZING VASCULITIS:

- Necrosis of endothelial cells.
- Degeneration of collagen in the walls of blood vessels.
- Inflammatory cellular infiltrate within and around the affected blood vessels.
- Fibrin deposition within the walls.
- Nuclear dust.

NESTS:

- Round collections of cells.
- E.g.: melanocytes in melanocytic nevi.
- Atypical lymphocytes in M.F.

NEVOID:

- Means hamartomatous: a malformation lesion that consists of mature structures.

NEVUS:

- Is a word that must be modified always.
- E.g.: -A hamartoma in the sense of organoid nevus, such as: nevus sebaceous of Jadassohn.
- A derivative of melanocytes such as: a melanocytic nevus.

NEVUS CELL:

- A cell in dermis of a compound or intradermal type of melanocytic nevus.
- Fundamentally a melanocyte

NODULE:

- A round elevated dome shaped solid lesion.
- Formed of cells, deposits or elements of connective tissue.
- **Pathogenesis:** nodules result from either:
 - **Massive dermal infiltrate:**
 - e.g.:
 - nodules of lepromatous leprosy :(= dense diffuse dermal infiltrate composed of foamy histiocytes).
 - nodules of malignant melanoma :(= dermal infiltrate of atypical melanocytes).
 - fibroxanthoma :(= dermal infiltrate of atypical mesenchymal cells).
 - nodules of GOUT :(= dermal deposits of urate).
 - **Large infiltrates in the subcutaneous fat:**
 - e.g.:
 - nodules of rheumatoid arthritis :(= subcutaneous deposits of fibrin).
 - nodules of erythema nodosum :(= subcutaneous deposits of chronic inflammatory infiltrate with granuloma formation).

NUCLEAR DUST:

- See leucocytoclasia.

O:

ORTHOKERATOSIS:

- Hyperkeratosis in which nuclei are not retained in the cells of the cornified layer.
- See hyperkeratosis.

P:

PAGET CELL:

- Refers to a cell that is specific for mammary and extra-mammary Paget's disease.
- Ccc.: - large round or oval nucleus and abundant pale staining cytoplasm containing mucopolysaccharides.

PAGETOID CELL:

- Refers to a cell resembling Paget cell.
- E.g.: in malignant melanoma.

PAGETOID PATTERN:

- Describes the scattering of Paget cells through epithelium as it appears in Mammary and Extra-mammary Paget disease.
- It also describes the scattering of atypical cell (in Bowen's disease and malignant melanoma).

PAPILLA:

- Cone-shaped elongation of the dermis protrude into the epidermis (= sub-epidermal papilla) surrounded by rete ridges.

PAPILLATED:

- Describes nipple shaped elevation above the skin surface to designate an exophytic type of epidermal hyperplasia.

PAPILLOMA:

- Tumour or tumour-like proliferation of the skin caused by finger like projections above the skin surface.
- **Caused by:** upward extension of dermal papillae (papillomatosis) + a covering of hyperplastic epidermis (acanthosis).
- **E.g.:** - **linear epidermal nevus:**
 - hyperkeratosis.
 - Papillomatosis.
 - Acanthosis: with elongation of rete ridges.
- **Seborrheic keratosis:**
 - Hyperkeratosis.
 - Acanthosis: - upward extension of the tumour.
 - Basaloid cells are predominating.
 - Horn cysts and pseudohorn cysts.
 - Papillomatosis.
- **verruca vulgaris:**
 - Features of papilloma +
 - Vacuolated cells (koilocytes) in upper stratum malpighii and granular cells.
 - Vertical lines of parakeratotic cells.

- Foci of clumped keratohyaline granules.

- solar keratosis :(hypertrophic type):

- Hyperkeratosis (intermingled with areas of parakeratosis).
- Papillomatosis.
- Acanthosis: - irregular epidermal hyperplasia.
 - Disordered arrangement of keratinocytes=loss of polarity.
 - Nuclear anaplasia.

-acanthosis nigricans:

- Hyperkeratosis→ brown colour of lesion.
- papillomatosis: dermal papillae project upward as finger like projections, the valleys between the papillae shows mild acanthosis and are filled with keratotic material.
- Stratum malpighii is thin at the tips and sides of the papillae. (i.e. irregular acanthosis).
- No hyperpigmentation of basal cells.

PAPILLOMATOSIS:

- Accentuation of the dermal papillae so that they project slightly or markedly above the skin surface, e.g.: acanthosis nigricans.
- The epidermis overlying the elongated papillae may it may not be hyperplastic.

PAPULE:

- A solid elevated lesion up to 1 cm. in diameter.
- **Pathogenesis:** caused by an infiltrate (cellular or acellular within papillary dermis).
- **E.g.:** - **papule of lichen nitidus:**
 - caused by a dense histiocytic infiltrate expanding the dermal papillae.
- **Papule of lichen amyloidosis:**
 - caused by deposits of amyloid in dermal papillae.
- **Leukaemic papules:**
 - caused by dense diffuse dermal infiltrate interpositioned between collagen bundles.
- **Papule of psoriasis: (papulosquamous lesion):**
 - Caused by dermal oedema, inflammatory cells and squamous component: - hyperkeratosis, acanthosis (↑ rete ridges).
- **Papule of plane wart:**
 - caused mainly by epidermal componenet; i.e. epidermal hyperplasia.

- **Papule of molluscum contagiosum:**
 - caused by infundibular hyperplasia.
- **Papule of lichen simplex chronicus:**
 - caused by thickening of both dermis and epidermis.
- **Lichenoid papule:**
 - Flat topped papule (lichen planus).

PAPULOVESICLE:

- A combination of a papule and a vesicle.

PARAKERATOSIS:

- Incomplete keratinisation CCC. By retention of nuclei in the horny layer +hypogranulosis or absent granular layer.
- In the mucous membrane: it is a physiologic event.
- **Diagnostic patterns:**
 - Focal parakeratosis (as scattered parakeratotic mounds):e.g.: early psoriasis.
 - Intermittent parakeratosis, alternating with areas of Orthokeratosis: e.g.: inflammatory linear verrucous epidermal nevus.
 - Slightly slanted column of parakeratosis: e.g.: parakeratosis.
 - Plump hyperchromatic parakeratotic nuclei: e.g.: verruca vulgaris (nuclei are filled with viral particles).

PARAPSORISIS EN PLAQUE:

- A synonym for the early patch stage of mycosis fungoides.

PATCH:

- macular lesion > 1 cm.(=broad flat lesion)
- e.g.:
 - café au lait patches in neurofibromatosis.
 - Purple patch (ecchymosis, cause: extravasated erythrocytes).
 - Reddish patch (=sun burn, caused by congestion of erythrocytes within dilated blood vessels in the superficial dermis).

PAUTRIER'S MICROABSCESS:

- A collection of atypical mononuclear cells within the epidermis of lesion of mycosis fungoides.

PEDUNCULATED:

- Attached to the skin by a pedicle or stalk.

PETECHIAE:

- A pin point purple macule much less than 1 cm. caused by extravasated erythrocytes in papillary dermis.

PIGMENTARY INCONTINENCE:

- Mentioned B4.

PIGMENTATION:

- = discolouration.
- A colouration caused by variety of pigments most commonly **MELANIN** which is responsible for variety of colours:
 - **Black colour:**
 - Abundant melanin at all levels of epidermis including the cornified layer, e.g.: junctional mucous membrane.
 - **Blue colour:**
 - Abundant melanin within melanocytes and melanophages in the mid and deep dermis, e.g.: blue nevus.
 - **Tan colour:**
 - Melanin in the epidermis (scattered) e.g.: café au lait spot.
 - **Grey colour:**
 - Diffuse dermal melanosis.e.g.: metastatic malignant melanoma.
 - **Ashy colour:**
 - Melanin within epidermal cells and dermal melanophages, e.g.: erythema dyschromium perstans.

PLAQUE:

- An elevated broad lesion refers to a circumscribed thickened or indurated area > 1 cm. and formed by coalescence of papules.
- E.g.: the plaque stage of mycosis fungoides.

PLEOMORPHISM:

- Variation in the appearance of nuclei of the same cell type, pronounced pleomorphism. (Anaplasia).
- Means large irregular hyperchromatic nuclei denoting malignancy.

POIKILODERMA VASCULAR ATROPHICANS:

- A synonym for the late patch stage of Mycosis Fungoides.i.e.: a plaque of Mycosis Fungoides that has undergone spontaneous regression with residual features of poikiloderma.i.e. atrophy, telangiectasis, hyperpigmentation and hypopigmentation.

POLYMORPHIC ERUPTION:

- Means having more than 1 type of primary and/or secondary skin lesions.i.e. Combination of macules, papules, vesicles and so on.....

POLYMORPHISM:

- Variation in types of cells, e.g.: in inflammatory diseases (it is NOT an indication of malignancy).

POLYPOID:

- Like a polyp, an excrescence above the skin surface having a narrow base and a stalk.

PSEUDOGLANDULAR:

- Tendency to form acini, tubules or gland like structures.
- E.g.: in adenoid squamous cell carcinoma, as a result of dyskeratosis and acantholysis.

PSORIASIFORM:

- resembling psoriasis both clinically and Histologically:
- Clinically: reddish plaques covered by scales.
- Histologically: regular elongation of rete ridges.

PURPURA:

- purple colour caused by visible haemorrhage in the skin:(
extravasation of erythrocytes in the dermis):
 - Petichae: pin point purple macule.
 - Ecchymosis: purple patch.
 - Haematoma: a swelling caused by haemorrhage in deep dermis or subcutaneous tissue.

PUSHING MARGINS:

- Is applied to the smooth rounded borders of a neoplasm that appears to grow centrifugally, a well-circumscribed neoplasm.
- E.g.: verrucous carcinoma.

PUSTULE:

- = a circumscribed collection of pus (neutrophils and necrotic debris).
- **Most pustules are intra-epidermal:**
 - Intra- corneal: e.g.: candidiasis.
 - Sub corneal: e.g.: pustular dermatosis.
 - Spongiform: e.g.: pustular psoriasis.
- N.B.: pustules seen in early vegetations in pemphigus vegetans are filled with eosinophils.

PYKNOSIS:

- = Shrinkage of nuclei.

R:

RETICULAR DEGENERATION OF EPIDERMIS:

- Severe intracellular oedema of keratinocytes → bursting of epidermal cells → multi-locular bulla, septa inside which are formed by the resisting cell walls.
- E.g.: - blisters of acute dermatitis. - Viral blisters.

RETICULUM CELL SARCOMA:

- It designates nodular lesions of Mycosis Fungoides and Large cell Lymphoma of the skin, whose cells resembles histiocytes but are actually large, atypical T lymphocytes.
- Reticulum cell sarcoma had been replaced by other terms as: histiocytic, centroblastic, lymphoblastic and immunoblastic lymphomas.

S:

SCALE:

- Collection of orthokeratotic cells, parakeratotic cells or both to become visible on the skin surface.

SCALE-CRUST:

- Scale (cornified cells) +crust (dried exudate, serum containing blood cells, fibrin, and bacteria).

SCAR:

- = Fibrosis that replaces the normal arrangement of collagen.
- **Histologically:**
 - Scar is made up of:
 - Collagen fibers, parallel to the skin surface.
 - High number of fibroblasts.
 - Dilated blood vessels, perpendicular to the skin surface.

SCLEROSIS:

- A circumscribed area of diffuse induration of the skin detectable only by palpation, e.g.: Scleroderma.
- Histologically:
 - Homogenization and hyalinization of collagen.
 - decrease number of fibroblasts.

SEPTAL PANNICULITIS:

- An inflammatory process in the subcutaneous fat in which inflammatory cells are infiltrated mostly in the septa rather than the lobules.

SESSILE:

- A seated broad based excrescence above the skin surface.

SIDEROPHAGE:

- Macrophage that has ingested iron.

SINUS TRACT:

- Epithelium lined channel which opens on skin surface, e.g.: pilonidal sinus.

SOLAR ELASTOSIS:

- Altered spaghetti like connective tissue produced by fibroblasts that have been chronically affected by sun light.

SPONGIFORM PUSTULE OF KOBOJ:

- A multilocular pustule located in upper stratum malpighii.
- CCC. by intercellular presence of neutrophils within a sponge like network formed by flattened degenerated keratinocytes.
- As the spongiform pustule moves upwards with the proliferating epidermis into the horny layer, they manifest themselves as Munro's microabscesses.
- E.g.: pustular psoriasis.

SPONGIOSIS:

- Intercellular oedema recognized by widening of intercellular spaces and stretching of the intercellular bridges between the keratinocytes.
- It occurs in the inflammatory processes, e.g.: acute and subacute dermatitis → spongistic blister.
- Severe spongiosis + intracellular oedema → reticular degeneration of epidermis.

SQUAMOID:

- resembling the cells of the spinous zone of the epidermis,
- e.g.: those seen in verruca vulgaris and squamous cell carcinoma.

STORIFORM PATTERN:

- Elongated cells intersect or interwine at various angles.
- Resembling the weaving of a door-mat.
- Occurs in various fibrous tumours.

STRATUM MALPIGHII:

- Nucleated, viable portion of the epidermis, including: basal, squamous and granular layers.

T:

TELENGIECTASIA:

- Dilated capillaries, venules and arterioles that are visible as tiny blood vessels near the skin surface.
- **2 types:**
 - In the presence of inflammatory reaction: e.g. chronically sun-damaged skin.

- Secondary to inflammatory reactions: resulting in poikiloderma.

TRABECULA:

- Fibrous septa, as in the subcutaneous fat.

TOUTEN GIANT CELL:

- A giant cell showing a wreath of nuclei around a central area of non foamy cytoplasm and a peripheral area of foamy lipidized cytoplasm.
- E.g.: Xanthomas, Juvenile Xanthogranuloma.

U:

ULCER:

- Loss of epidermis + part of the dermis.
- Healing occurs with scarring.

V:

VASCULAR ALTERATION:

- = Liquifactive degeneration = Hydropic degeneration. (Mentioned B4).

VASCULITIS:

- Inflammatory process in which inflammatory cellular infiltrate is partially localized within the walls of blood vessels.
- **Types:** - small vessel types: - allergic (leucocytoclasia)
- Septic.
- Large vessel types.

VEGETATION:

- Heaped up collection of scale crusts, sometimes haemorrhagic, often purulent.

VELLUS:

- Fine, delicate hairs found on much of the body, e.g.: faces, arms, trunk; in contrast to terminal hairs which are broader, longer and are found on the scalp, axillae and pubic region.

VERRUCOUS: (LIKE A VERRUCA):

- A rough finger shaped lesion, CCC. By digitated epidermal hyperplasia or neoplasia.

VESICLE:

- A fluid filled circumscribed elevated lesion less than 5 mm. in diameter.
- **2 types:**
 - Intraepidermal vesicles:

- e.g.: - allergic contact dermatitis. – Varicella.
 - Herpes zoster and simplex. – Pemphigus vulgaris.
 - Subepidermal vesicles: e.g.: -dermatitis herpetiformis.
 - Bullous pemphigoid.
 - Porphyria cutanea tarda.

VESICULOBULLOUS:

- Vesicles + blisters (bullae). i.e.: small + large blisters.

VESICULOPUSTULAR:

- A lesion that has features of: - small blister (containing plasma).
 - Pustule (containing neutrophils).

VILLI:

- Elongated and tortuous dermal papillae, covered with a single layer of basal cells.
- Extending into a bulla, vesicle or lacuna that has formed due to suprabasal acantholysis.
- E.g.: - Pemphigus vegetans.
 - Familial benign pemphigus.
 - Transient acantholytic dermatosis.
 - Warty dyskeratoma.
 - Darier disease.